

## 14.0 TRAINING

### 14.1 Introduction and Objectives

The implementation of any new ambient monitoring program requires resources dedicated to providing appropriate training in a number of diverse subjects; deploying a network to monitor a new pollutant with a new sampling method requires exceptional efforts. Given that the new monitoring network for PM<sub>2.5</sub> will involve the selection of new sites, the operation of new Federal Reference Method (FRM) monitors, the evaluation of other candidate monitoring methods, the analysis of existing demographics, and new metrics, a comprehensive and diverse training program will be required. This program will be designed to meet the needs of a range of environmental managers, data analysts, and technical staff, at the Federal, State, and Local government levels as well as selected representatives from the private sector.

This section will outline the training requirements and mechanisms necessary to fulfill the following objectives:

- Provide detailed, complete explanations of the revisions to 40 CFR 58 concerning the monitoring requirements for PM<sub>2.5</sub>.
- Explain the PM<sub>2.5</sub> Network Design.
- Explain and demonstrate the routine operations and maintenance requirements of the Federal Reference Method for PM<sub>2.5</sub>.
- Describe the laboratory procedures for PM<sub>2.5</sub> gravimetric and chemical speciation analyses.
- Delineate the appropriate quality assurance/quality control procedures for both PM<sub>2.5</sub> field and laboratory activities.

### 14.2 Available Training Mechanisms

EPA is considering a number of mechanisms for both formal and informal training with stakeholders in the revised particulate monitoring program. The following are examples of the types of efforts which are expected:

- **Workshops** - It is expected that EPA technical staff will visit each Regional Office to discuss the requirements of the particulate matter (PM) rule and the operation of the new monitors with Regional monitoring and laboratory staff. In some instances, State and local personnel may also be in attendance.
- **Satellite Training** - In conjunction with the Information Transfer and Program Integration Division (ITPID), satellite training workshops will be held. The workshops will be crafted to provide an initial overview for managers, as well as the technical information required by monitoring and laboratory technicians and will contain an interactive component. These productions may also be distributed via video tape for later viewing.
- **Technical Assistance** - EPA will provide the expert assistance from both OAR, the

Regional Offices and ORD scientists and engineers in the design and implementation of specific PM<sub>2.5</sub> monitoring networks. Additionally, EPA will explore the use of contractual assistance for both State and Local government in the design and operation of PM<sub>2.5</sub> monitoring networks.

- **Courses** - The Air Pollution Training Institute (APTI), located within ITPID, will plan and conduct training courses for the benefit of stakeholders. These courses may take the form of on-site training, satellite broadcasts, or self-instructional courses. Additionally, efforts are underway to incorporate, as appropriate, PM 2.5 monitoring information into existing APTI courses. Examples of APTI courses that are expected to be updated are: "Site Selection for the Monitoring of SO<sub>2</sub> and PM<sub>10</sub> in Ambient Air"(APTI Course SI:436), "Atmospheric Sampling" ( APTI Course 435), and "Introduction to Ambient Air Monitoring"(APTI Course 434),
- **Guidance Manuals** - EPA intends to issue appropriate guidance to cover such subjects as rule interpretation, sampler operation, quality assurance, network design, data management/analysis, monitoring plan approval process, etc.
- **Web Site** - Technical information pertaining to PM 2.5 monitoring is posted on AMTIC. The URL address is [HTTP://WWW.EPA.GOV/TTN](http://WWW.EPA.GOV/TTN) and then select AMTIC. The current seven categories of PM 2.5 information are: NAAQS and CFR; Network Design; Federal Reference Method; Points of Contact; Quality Assurance, Speciation, and Training.
- **End User Provided Training** - Each of the Stakeholders in this project are supplying some PM 2.5 training. An effort is being made to list these under the PM 2.5 Training Section of AMTIC. Additional information is also available by contacting the individual Stakeholder of interest.

### 14.3 Stakeholders and Participants

Given the complexity of the training process, the enormity of the effort of instituting a new nationwide monitoring program, the variety of expected problems, and the logistics of supporting such a large undertaking in a relatively short period of time, EPA intends to formulate a PM<sub>2.5</sub> Training Group to provide counsel in the development of PM training programs. Currently EPA is engaging the assistance of such varied groups as the Northeast States Consortium of Air Use Managers (NESCAUM), the Western States Air Resources Council (WESTAR), the Mid-Atlantic Region Regional Air Management Association (MARAMA), the California Air Resources Board (CARB), the Air and Waste Management Association (A&WMA), the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials, and others.

### 14.4 Proposed Schedule of Training Events

Since the deployment of the PM<sub>2.5</sub> monitoring network will begin in late 1997 and early 1998, initial implementation training will need to be arranged during the fall of 1997; quality assurance and data management will likely follow in the spring of 1998. Current anticipated training events are reflected on the attached matrix.

**Table 14.1 PM-2.5 Monitoring Training and Guidance**

| <b>Dates</b>   | <b>Training Area</b>  | <b>Rules/Guidance</b>   | <b>Training Venue</b>   | <b>Actual Trng Available</b>  |
|----------------|---|---|---|---|
| Summer, 97     | PM 2.5 Monitoring   |   | EPA ROs-HQ (Each Regional Office)                                 | August-October in Each RO   |
| Fall, 1997     | PM <sub>2.5</sub> Planning & Training Conf.   |   | EPA HQ/Regional Office Planning Conf.                             | RTP Meeting, October 1997   |
|                | Network Design & Siting Criteria  | Draft Guidance for Network Design (9/97)  | EPA, Regional Workshops, Regional monitoring meeting, SAMWG, ECOS | APTI SI:436 (needs revision), Oct. 14 APDLN broadcast on PM <sub>2.5</sub> Mon. and Regnl. Haze |
|                | QA/QC Procedures  | Draft Guidance for QA of Instrument Operation, Filter Handling & Weighing, DQO's (9/97) | EPA, Regional mon. meeting, SAMWG                                 | Oct. 14 APDLN broadcast   |
|                | Particulate Matter NAAQS revisions and modeling   |   | WESTAR  | Oct 14-16,1997, Breckenridge, CO  |
|                | General Monitoring Workshop   |   | MARAMA  | Workshop, Oct. 15-16, DE  |
|                | PM 2.5 Monitoring   |   | SAMWG   | Oct 24-25, Grand Rapids,MI  |
|                | PM 2.5 Monitoring   |   | STAPPA/ALAPCO   | Oct 26-29, Grand Rapids,MI  |
|                | PM 2.5 Monitoring Overview- Network Design, FRM Operation, QA   |   | EPA Region 9  | Oct 29-30,1997, San Francisco,CA  |
|                | Implementation of the new PM standard and regional haze rules, Implementation of the new and revised ozone NAAQS, Operating permits and new source review, Air toxics program |   | EPA, STAPPA/ALAPCO  | Nov 12-14, Durham, NC   |
|                | New PM Monitoring Requirements  |   | WESTAR/EPA  | Nov. 18-20, Denver, CO  |
| Winter, 1997/8 | QA/QC Procedures  | Final Guidance for QA of Instrument Operation, Filter Handling & Weighing, DQO's (1/98) | EPA-APTI 435 & 470, Regional monitoring meetings and workshops    |   |

| Dates          | Training Area   | Rules/Guidance  | Training Venue  | Actual Trng Available            |
|----------------|---|---|---|----------------------------------|
|                | Measurement methods,Network Design,Field Studies,Modeling, Emissions,Control Measures,Implementation,Relationship to other pollutants |   | A&WMA   | Jan 28-30,1998,Long Beach,CA     |
|                | PM 2.5 Monitor Operation  |   | EPA   | Feb, 1998 APDLN broadcast        |
| Spring, 1998   | Network Design & Siting Criteria  | Final Guidance for Network Design (3/98)                    | Regional Workshops, EPA-satellite broadcast, EPA-APTI 436                   |                                  |
|                | PM 2.5 Monitoring QA,Chemical Speciation, & FRM   |   | EPA   | April, 1998 APDLN broadcast      |
|                | Laboratory procedures   | Draft Guid. for Chem. Spec., Lab Analyses (3/98)            | Regnl. mon. meeting, workshops, SAMWG                                       |                                  |
|                | PM <sub>2.5</sub> Mon. Practices/Difficulties   |   | Regional Annual Monitoring Meeting  | RTP Workshop (TBA)               |
| Summer, 1998   | Field Training on new monitors  | Training for PM-monitoring (6/98 and on)                    | EPA using monitoring platforms, videos                                      | CARB video                       |
|                | PM 2.5 FRM Performance Audit Train the Trainer  |   | EPA   | August, 1998 Workshop in RTP, NC |
| Fall, 1998     | Laboratory procedures   | Final Guidance for Chemical Speciation, Lab Analyses (9/98) | EPA-Expert Oversight Panel, EPA-APTI 435 & 470, Hands-on classroom training |                                  |
|                | PM 2.5 FRM Performance Audit Training   |   | EPA   | Oct, 1998 Workshop               |
|                | PM 2.5 FRM Performance Audit  |   | EPA   | Nov, 1998 APDLN broadcast        |
| Winter, 1998/9 | QA/QC procedures  | Performing QA for PM-2.5 Monitoring (1/99)                  | Regional monitoring meeting, SAMWG  |                                  |
|                | PM 2.5 Chemical Speciation Implementation   |   | EPA   | Dec, 1998, APDLN broadcast       |